

IN THE SPECIFICATION:

In the paragraphs on page 2, line 16 through page 3, line 14:

Accordingly, in a first aspect, the present invention consists in a pressure regulating device for use with a breathing assistance apparatus which conveys inhalatory ~~gas to gases to,~~ and removes exhalatory ~~gas from gases from~~ a patient requiring breathing assistance, comprising:

1 a container which in use includes a body of liquid, having a substantially constant level in use,

a terminal conduit ~~terminal conduit means~~ including proximate and distal ends, said proximate end adapted for connection to a breathing assistance apparatus and in use accepting exhalatory gas therefrom ~~gases therefrom~~, and said distal end submerged in said body of liquid,

such that in use the mean pressure of said ~~inhalatory gases supplied~~ gas supplied to a patient is adjusted by the level to which said distal end is submerged in said body of liquid.

In a second aspect, the present invention consists in a breathing assistance apparatus for supplying gas ~~supplying gases~~ to a patient to assist said patient's breathing a gas supply ~~including: gases supply means~~ adapted to supply gas ~~supply gases~~ to said patient, ~~delivery means~~ an interface including a plurality of ports adapted to deliver said ~~flow of gases~~ gas to said patient, an inhalatory conduit ~~inhalatory gases transport means~~ for conveying said ~~flow of gases from~~ gas from said gas supply ~~gases supply means~~ to said interface ~~delivery means~~, exhalatory conduit ~~gases transport means~~ for conveying said patient's exhalations from said interface ~~delivery means~~, and a pressure regulating device ~~disposed within or in fluid communication with said exhalatory gases transport means, said pressure regulating device~~ comprising:

a container which in use includes a body of liquid, and

a terminal conduit ~~terminal conduit means~~ including proximate and distal ends, said proximate end adapted for connection ~~in use connected~~ to said exhalatory ~~gases transport~~ conduit and in use means and accepting ~~said patient's exhalations~~ exhalatory gas therefrom, and said distal end submerged in said body of liquid,

such that in use ~~the mean pressure of said inhalatory gases supplied to said patient is~~ delivered a substantially constant mean pressure, said mean pressure adjusted by the level to which said distal end is submerged in said body ~~of liquid~~ of water.

In a third aspect, the present invention consists in a pressure regulating device for use with a breathing assistance apparatus which conveys inhalatory gas ~~inhalatory gases~~ to, and removes exhalatory gas ~~exhalatory gases~~ from a patient requiring breathing assistance, comprising:

a container which in use includes a body of liquid having substantially constant level ~~in use~~, and

W a terminal conduit ~~terminal conduit means~~ including proximate and distal ends, said proximate end adapted for connection to a breathing assistance apparatus and accepting ~~exhalatory gases~~ exhalatory gas therefrom, and said distal end submerged in said body of liquid,

such that in use the resultant bubbling occurring in said body ~~of water~~ of liquid produces relatively small controlled perturbations in the pressure of ~~inhalatory gases~~ gas supplied ~~supplied~~ to a patient.

In the paragraph on page 4, lines 14-27:

A2 Referring now to Figure 1 in which a typical application is depicted. A humidified Positive End Expiratory Pressure (PEEP) system is shown in which a patient 119 is receiving ~~humidified~~ humidified 114 and ~~pressurised gas~~ pressurised gases through a nasal mask 128 connected to ~~a inhalatory~~ an inhalatory conduit 121. It should be understood that the present invention, however, is not limited to the delivery of PEEP gases but is also applicable to other types of gases delivery systems and may not necessarily involve humidification. Inhalatory conduit 121 is connected to the outlet 112 of a humidification chamber 110 which contains a volume of water 115. Inspiratory conduit 121 may contain heating means or heater wires ~~118~~ 120 which heat the walls of the conduit to ensure a constant humidity profile along the conduit and therefore reduce condensation of humidified gases within the conduit. As the volume of water 115 within humidification chamber 110 is ~~heated~~ heated 113, water vapour begins to fill the volume of the chamber above the water's surface and is passed out of the humidification chamber 110 outlet 112 with the flow of gases (for example air) provided from a gases supply means or blower 118 which enters the chamber 110 through inlet 116.

In the paragraph on page 5, lines 7-13:

A3 Referring now to Figures 2 through to 7, the pressure regulator 134 and associated components are seen in more detail. The exhalatory conduit (130, Figure 1) fits into the end of the short conduit 136 which in turn is attached to the lid 144 of the water ~~chamber 142~~ chamber 204 via connector 146. The connector 146 includes a number of resilient ridges or plastic toggles 148 which lock into annular grooves 150 in the short conduit 136 to keep it locked in a desired position during use. The chamber 204 is filled with a body of water 138

Q3 up to a predetermined ~~level 140~~ level 140. It will be appreciated that any appropriate liquid could be used instead of water.

In the paragraph on page 6, lines 22-28:

Q4 It will also be appreciated that the apparatus used to vary the mean water level in the main chamber may take a number of forms. While in the preferred embodiment a slidable conduit is used, other forms such a concertina baffle or rotatable conduit, for example, would be equally applicable. It will also be appreciated further forms of the overflow facility will be possible. For example the further embodiment shown in Figure 8, uses a thin slot 162 to pass water into a second chamber 160, where ~~baffles~~ baffles 164 smooth any variations before the overflow opening 166 into the overflow chamber 168.
